



SCHEMATIC REPRESENTATION OF THE PHAGEMID VECTOR pCES1

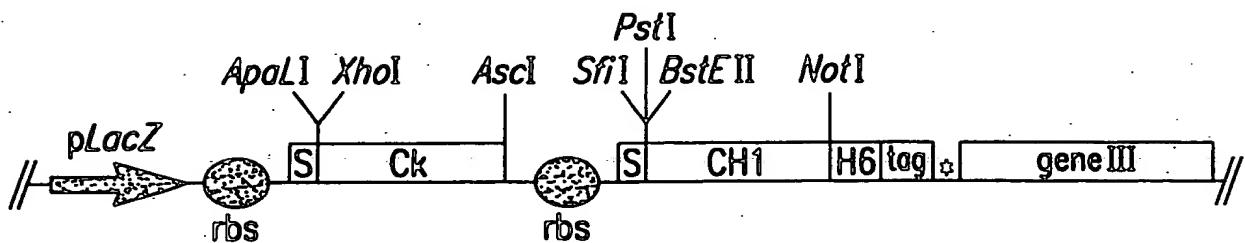


FIG. 1A



POLYLINKER REGION OF THE PHAGEMID VECTOR pCES1 (SEQ ID NO: 6)

The diagram shows the sequence of the Human CK gene. The sequence is: ATC AAA CGT GGA ACT GTG ... GGA GAG TGT TAA TAA GGC GCG CCA ATT CTA TTT CAA GGA GAC AGT CAT A. The restriction site GGC GCG is underlined. An arrow points to the start codon ATG. Another arrow points to the stop codon TTT, which is followed by the word "Stops". To the left of the sequence, the restriction enzymes I K R G T V G E C * * * are listed above the sequence. To the right, the label "Human CK gene" is written below the sequence, and the label "rbs" is written above the sequence.

ATG AAA TAC CTA TTG CCT ACG GCA GCC GCT GGA TTG TTA CTC GCG GCC CAG CCG GCC ATG GCC CAG GTG
 M K Y L L P T A A G L L A A Q P A M A Q V

CAT CAC GGG GCC GCA GAA CAA AAA CTC ATC TCA GAA GAG GAT CTG AAT GGG GCC GCA TAG ACT GTT
H H G A A E Q K L I S E D L N G A A * T V
Tag SEQ ID NO: 5)
C-Myc Tag }
Amber GeneIII

(SEQ ID. NO: 8)

1B
FIG.

Oligonucleotide primers used for construction of the library

A. Primary amplifications

IgM heavy chain constant region

HuIgMFOR 5'-TGG AAG AGG CAC GTC CTT TTC TTT-3' (SEQ ID No:9)

κ light chain constant region

HuCKFOR 5'-ACA CTC TCC CCT GTT GAA GCT CTT-3' (SEQ ID No:10) HuCK-FOR-ASC

λ light chain constant region

HuCl2-FOR 5'-TGA ACA TTC TGT AGG GGC CAC TG-3' (SEQ ID No:11) HuCl2-FOR-ASC

HuCl7-FOR 5'-AGA GCA TTG TGC AGG GGC CAC TG-3' (SEQ ID No:12) HuCl7-FOR-ASC

B. Secondary amplifications

κ light chain constant region

HuVH1B/7A-BACK 5'-ACA CTC TCC CCT GTT GAA GCT CTT-3' (SEQ ID No:13) HuVH1B/7A-BACK-SFI

HuVH1C-BACK 5'-SAG GTC CAG CTG GTR CAG TCT GG-3' (SEQ ID No:14) HuVH1C-BACK-SFI

HuVH2B-BACK 5'-CAG RTC ACC TTG AAG GAG TCT GG-3' (SEQ ID No:15) HuVH2B-BACK-SFI

HuVH3B-BACK 5'-SAG GTG CAG CTG GTG GAG TCT GG-3' (SEQ ID No:16) HuVH3B-BACK-SFI

HuVH3C-BACK 5'-GAG GTG CAG CTG GTG GAG WCY GG-3' (SEQ ID No:17) HuVH3C-BACK-SFI

HuVH4B-BACK 5'-CAG GTG CAG CTA CAG CAG TGG GG-3' (SEQ ID No:18) HuVH4B-BACK-SFI

HuVH4C-BACK 5'-CAG STG CAG CTG CAG GAG TCS GG-3' (SEQ ID No:19) HuVH4C-BACK-SFI

HuVH5B-BACK 5'-GAR GTG CAG CTG GTG CAG TCT GG-3' (SEQ ID No:20) HuVH5B-BACK-SFI

HuVH6A-BACK 5'-CAG GTA CAG CTG CAG CAG TCA GG-3' (SEQ ID No:21) HuVH6A-BACK-SFI

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FIG. 2j





Oligonucleotide primers used for construction of the library

V _k back	V _k forward
HuV _k 1B-BACK	HuJH1/2-FOR
HuV _k 2-BACK	HuJH3-FOR
HuV _k 3B-BACK	HuJH4/5-FOR
HuV _k 4B-BACK	HuJH6-FOR
HuV _k 5-BACK	
HuV _k 6-BACK	

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5'-GAC ATC CAG WTG ACC CAG TCT CC-3' (SEQ ID NO:22) HuV_k1B-BACK-APA
5'-GAT GTT GTG ATG ACT CAG TCT CC-3' (SEQ ID NO:23) HuV_k2-BACK-APA
5'-GAA ATT GTG WTG ACR CAG TCT CC-3' (SEQ ID NO:24) HuV_k3B-BACK-APA
5'-GAT ATT GTG ATG ACC CAC ACT CC-3' (SEQ ID NO:25) HuV_k4B-BACK-APA
5'-GAA ACG ACA CTC ACG CAG TCT CC-3' (SEQ ID NO:26) HuV_k5-BACK-APA
5'-GAA ATT GTG CTG ACT CAG TCT CC-3' (SEQ ID NO:27) HuV_k6-BACK-APA

FIG.2ii



Oligonucleotide primers used for construction of the library

Vλ back	Vλ back
HuVλ1A-BACK	5'-CAG TCT GTG CTG ACT CAG CCA CC-3' (SEQ ID NO:28)
HuVλ1B-BACK	5'-CAG TCT GTG YTG ACG CAG CCG CC-3' (SEQ ID NO:29)
HuVλ1C-BACK	5'-CAG TCT GTC GTG ACG CAG CCG CC-3' (SEQ ID NO:30)
HuVλ2-BACK	5'-CAR TCT GCC CTG ACT CAG CCT-3' (SEQ ID NO:31)
HuVλ3A-BACK	5'-TCC TAT GWG CTG ACT CAG CCA CC-3' (SEQ ID NO:32)
HuVλ3B-BACK	5'-TCT TCT GAG CTG ACT CAG GAC CC-3' (SEQ ID NO:33)
HuVλ4-BACK	5'-CAC GTT ATA CTG ACT CAA CCG CC-3' (SEQ ID NO:34)
HuVλ5-BACK	5'-CAG GCT GTG CTG ACT CAG CCG TC-3' (SEQ ID NO:35)
HuVλ6-BACK	5'-AAT TTT ATG CTG ACT CAG CCC CA-3' (SEQ ID NO:36)
HuVλ7/8-BACK	5'-CAG RCT GTG GTG ACY CAG GAG CC-3' (SEQ ID NO:37)
HuVλ9-BACK	5'-CWG CCT GTG CTG ACT CAG CCM CC-3' (SEQ ID NO:38)

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FIG.2iii

Oligonucleotide primers used for construction of the library

5'-ACC GCC TCC ACC GGG CGG CGC GCC CGG CAG CCC TTA TTA ACA CTC CCT GTT GAA GCT CTT-3' (SEQ ID NO:39)

5'-ACC GCC TCC ACC GGG CGG CGC GCC ATG TCA TGT AGG GGC CAC TG-3' (SEQ ID NO:40)

5'-ACC GCC TCC ACC GGG CGG CGC GCC ATG TTA AGA GCA TTC TGC AGG GGC CAC TG-3' (SEQ ID NO:41)

5'-GTC CTC GCA ACT GCG GCG CAG CCG CCG GCC ATG GCG CAG RTG CAG CTG GTG CAR TCT GG-3' (SEQ ID NO:42)

5'-GTC CTC GCA ACT GCG GCG CAG CCG CCG GCC ATG GCG CAG SAG GTC CAG CTG GTR CAG TCT GG-3' (SEQ ID NO:43)

5'-GTC CTC GCA ACT GCG GCG CAG CCG CCG GCC ATG GCG CAG RTC ACC TTG AAG GAG TCT GG-3' (SEQ ID NO:44)

5'-GTC CTC GCA ACT GCG GCG CAG CCG CCG GCC ATG GCG SAG GTG CAG CTG GTG GAG TCT GG-3' (SEQ ID NO:45)

5'-GTC CTC GCA ACT GCG GCG CAG CCG CCG GCC ATG GCG CAG GTG CAG CTG GTG GAG WCY GC-3' (SEQ ID NO:46)

5'-GTC CTC GCA ACT GCG GCG CAG CCG CCG GCC ATG GCG CAG GTG CAG CTA CAG CAG TGG GG-3' (SEQ ID NO:47)

5'-GTC CTC GCA ACT GCG GCG CAG CCG CCG GCC ATG GCG CAG STG CAG CTG CAG GAG TCS GG-3' (SEQ ID NO:48)

5'-GTC CTC GCA ACT GCG GCG CAG CCG CCG GCC ATG GCG CAG GTR CAG CTG GAG TCT GG-3' (SEQ ID NO:49)

5'-GTC CTC GCA ACT GCG GCG CAG CCG CCG GCC ATG GCG CAG GTG CAG CTG GAG TCT GG-3' (SEQ ID NO:50)

FIG. 2iv





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Oligonucleotide primers used for construction of the library

5'-TGA GGA GAC GGT GAC CAG GGT GCC-3' (SEQ ID NO:51)

5'-TGA AGA GAC GGT GAC CAT TGT CCC-3' (SEQ ID NO:52)

5'-TGA GGA GAC GGT GAC CAG GGT TCC-3' (SEQ ID NO:53)

5'-TGA GGA GAC GGT GAC CGT GGT CCC-3' (SEQ ID NO:54)

5'-ACC GCC TCC ACC AGT GCA CTT GAC ATC CAG WTG ACC CAG TCT CC-3' (SEQ ID NO:55)

5'-ACC GCC TCC ACC AGT GCA CTT GAT GTT GTG ATG ACT CAG TCT CC-3' (SEQ ID NO:56)

5'-ACC GCC TCC ACC AGT GCA CTT GAA ATT GTG WTG ACR CAG TCT CC-3' (SEQ ID NO:57)

5'-ACC GCC TCC ACC AGT GCA CTT GAT ATT GTG ATG ACC CAC ACT CC-3' (SEQ ID NO:58)

5'-ACC GCC TCC ACC AGT GCA CTT GAA ACG ACA CTC ACG CAG TCT CC-3' (SEQ ID NO:59)

5'-ACC GCC TCC ACC AGT GCA CTT GAA ATT GTG CTG ACT CAG TCT CC-3' (SEQ ID NO:60)

FIG. 2V



Oligonucleotide primers used for construction of the library

5'-ACC GCC TCC ACC AGT GCA CAG TCT GTG CTG ACT CAG CCA CC-3' (SEQ ID NO:61)
5'-ACC GCC TCC ACC AGT GCA CAG TCT GTG YTG ACG CAG CCG CC-3' (SEQ ID NO:62)
5'-ACC GCC TCC ACC AGT GCA CAG TCT GTC GTG ACG CAG CCG CC-3' (SEQ ID NO:63)
5'-ACC GCC TCC ACC AGT GCA CAR TCT GCC CTG ACT CAG CCT-3' (SEQ ID NO:64)
5'-ACC GCC TCC ACC AGT GCA CTT TCC TAT Gwg CTG ACT CAG CCA CC-3' (SEQ ID NO:65)
5'-ACC GCC TCC ACC AGT GCA CTT TCT TGT GAG CTG ACT CAG GAC CC-3' (SEQ ID NO:66)
5'-ACC GCC TCC ACC AGT GCA CAC GTT ATA CTG ACT CAA CGG CC-3' (SEQ ID NO:67)
5'-ACC GCC TCC ACC AGT GCA CAG GCT GTG CTG ACT CAG CGG TC-3' (SEQ ID NO:68)
5'-ACC GCC TCC ACC AGT GCA CTT AAT TTT ATG CTG ACT CAG CCC CA-3' (SEQ ID NO:69)
5'-ACC GCC TCC ACC AGT GCA CAG RCT GTG GTG ACY CAG GAG CC-3' (SEQ ID NO:70)
5'-ACC GCC TCC ACC AGT GCA CAG CCT GTG ACT CAG CCM CC-3' (SEQ ID NO:71)

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FIG. 2vi